REMARKS

The Non-final Office Action, mailed October 16, 2007, considered claims 1, 2, 5–13, 15–30, 38–43 and 45–54. Claims 1, 2, 6, 10, 11, 12, 21, 25, 27, 28, 38–41, 43, 45, 49, 50, and 53 were rejected under 35 U.S.C. § 102(b), as being anticipated by Suzuki, U.S. Patent No. 5,956,488 (filed Mar. 15, 1996) (hereinafter Suzuki). Claims 5, 7, 15–17, 20, 29, 30, 42, and 48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, in view of Kuhn, U.S. Patent Pub. No. 2002/0157112 (filed Mar. 13, 2001) (hereinafter Kuhn). Claims 8, 9, 46, 47, and 52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, in view of Imajima et al., U.S. Patent No. 6,211,901 (filed May 21, 1996) (hereinafter Imajima). Claim 26 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, in view of Durana et al., U.S. Patent No. 6,018,765 (filed Jan. 23, 1997) (hereinafter Durana). Claims 13 and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki. Claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, in view of Kunn and further in view of Durana. Claims 22–24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, in view of McClain et al., U.S. Patent No. 6,772,214 (filed Apr. 27, 2000) (hereinafter McClain). Claim 51 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, in view of Imajima, and further in view of Stoel et al., U.S. Patent No. 5,905,942 (filed Feb. 18, 1997) (hereinafter Stoel).[1]

By this response, claims 1, 11, and 38 are amended such that claims 1–2, 5–13, 15–30, 38–43, and 45–54 remain pending.[2] Claims 1, 10, 11, 25, and 38 are independent claims which remain at issue. Support for the amendments may be found within Specification pp. 20, 22, 24–25, and 29.[3]

As reflected in the claims, the present invention is directed generally toward the aggregation of streaming media to improve network performance. Claim 1 recites, for instance,

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[1] Although the prior art status of the cited art is not being challenged at this time, Applicants reserve the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

[2] The amendment and remarks presented herein are consistent with the information presented by telephone by patent attorney John Bacoch (reg. no. 59,890) and attorney Thomas Bonacci.

[3] However, it should be noted that the present invention and claims as recited take support from the entire Specification. As such, no particular part of the Specification should be considered separately from the entirety of the Specification.

in combination with all the elements of the claim, receiving by an aggregation module a plurality of requests for real time streaming media. The method includes receiving by at least one aggregation module a request for real-time streaming media accessible via a wide area network from each of a plurality of receivers, each request comprising an identifier representative of the receiver making the request and a recitation of the access rights associated with the requesting receiver, and the aggregation module storing a list of each of the unique identifiers received for future access. The method includes the aggregation module determining whether the number of requests received is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level and aggregating a plurality of requests into a single request for a single copy of the real-time streaming media. The aggregation module sends the single request for a single copy of the real-time streaming media to the wide area network. The single copy of the media is buffered at the aggregation module and is then sent to the plurality of receivers. Further, the aggregation module tracks the activities of receivers and identifies frequently requested real-time streaming or continuous media.

Claim 10 is a computer program product embodiment of the method of claim 1.

Claim 11 recites, in combination with all the elements of the claim, a method including receiving at an aggregation module a request for streaming media accessible via a network from each of a plurality of receivers and the aggregation module determining whether the number of requests received is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level. Each request includes an identifier representative of the receiver making the request and a recitation of the access rights associated with the requesting receiver and the aggregation module stores a list of each of the unique identifiers received for future access. Further, the aggregation module tracks the activities of receivers and identifying frequently requested real-time streaming or continuous media. The method also includes aggregating a plurality of requests into a single request for a single copy of the real-time streaming media and sending the single request for a single copy of the streaming media to the network through a proxy module in communication with the aggregation module. When a copy of the media is received, the copy is buffered at the aggregation module. Finally, a stream of the buffered copy is delivered to a termination system for transmission to each of the plurality of receivers, where each of the plurality of receivers receives substantially the same packets of the buffered copy of the streaming media.

Claim 25 is a computer program product embodiment of the method of claim 11.

Claim 38 recites, in combination with all the elements of the claim, a system for displaying media retrieved from a network to a plurality of receivers. The system includes a source module storing media and a plurality of receivers communicating with the source module via a network, each of the plurality of receivers being configured to generate a request and receive the media from the source module at a first connection rate. The system also includes an access module communicating with the plurality of receivers and the source module through the network, the access module being configured to receive the request for media, track the activities of receivers and identifying frequently requested real-time streaming or continuous media, determine whether a number of requests is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level, aggregate requests by removing redundant requests to create a single request for a single copy of the real-time streaming media, send the single request for a single copy of the media to the network, and then subsequently change the delivery of the streaming media from a first format to a multicast format based upon changes to the first connection rate as media is delivered to two or more of the plurality of receivers. Each of the received requests includes an identifier representative of the receiver making the request and a recitation of the access rights associated with the requesting receiver.

Re Responses to Arguments:

The Office Action maintains that Suzuki meets the limitation of "determining whether the number of requests received is greater than a defined maximum number of requests . . . ."[4] For this element, the Office Actions cites to four elements of Suzuki:

i) if a single terminal issues a request for data not being requested by any of the other terminals, the data is retrieved and output to that single terminal (Suzuki col. 6, l. 14-29);

ii) a function for reconstructing a number of requests into a single unified request (Suzuki col. 24, l. 19-23);

iii) If requests for the same data are issued from two terminals almost simultaneously, i.e., within a prescribed period of time, the requests are reconstructed into a single unified

[4] Office Comm. pp. 2–3.

request (Suzuki col. 18, l. 26-38); and

iv) combining requests in order to reduce a number of accesses to memory devices with low access speed (Suzuki col. 1, l. 63-65).

From those four elements, the Examiner concludes that "Suzuki meets the limitation of 'determining whether the number of requests received is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level.'"[5]

The Applicants respectfully disagree. Reconstructing two requests issued almost simultaneously fails to teach determining if the number of requests exceeds a defined maximum number – it requires that *two* requests be issued *almost simultaneously*, not that any defined maximum number be exceeded. Further, Suzuki is plain in requiring a temporal element - the two requests must be almost simultaneous. Further, combining requests in order to reduce a number of accesses to memory devices with low access speed in no way teaches a "defined maximum number of requests" nor is there any determination made whether a number of requests received is greater than the defined maximum number of requests – only that *some* number of requests are combined in order to reduce the number of accesses to low speed devices. A defined maximum number is just that – a defined number. Suzuki fails to disclose such a defined number and Suzuki fails to teach a determination that the number of requests received is greater than that defined maximum number.

The Examiner also asserts that Suzuki teaches multicasting despite Suzuki being silent as to multicasting.[6] The Examiner asserts that "Since Suzuki discloses transmitting data to requesting terminals in response to a single data access, the examiner maintains that Suzuki teaches multicasting the data to the recipients."[7] The Applicants agree that Suzuki discloses transmitting data to requesting terminals in response to a single data access. However, the Applicants respectfully disagree that transmitting responses to multiple recipients from a *single access* inherently requires multicasting as the response format. It is completely possible that a single access (or a single request) generates a single broadcast to multiple recipients as a response. It is completely possible that a single access (or a single request) generates multiple unicast responses. There is no inherent implication that a single request or a single access results

[5] Office Comm. pp. 2–3.
[6] Office Comm. pp. 3–4.
[7] Office Comm. p. 4.

(as the Examiner seems to imply[8]) in a *response* to that request or access inherently being sent as a multicast. Because Suzuki is silent as to the particular format of the response and because there are multiple types of responses distinct from multicasting which are completely compatible with that disclosed by Suzuki, the Applicants maintain that it is error for the Examiner to conclude that Suzuki teaches multicasting.

Rejections Under 35 U.S.C. § 102:

Each of the independent claims 1, 10, 11, 25, and 38 were rejected under 35 U.S.C. § 102(b) as being anticipated by Suzuki.[9] The Applicant submits, however, that Suzuki fails to teach each and every element of the present invention as recited in the claims and fails to teach the elements being arranged as required by the claims. The Applicant respectfully reiterates the arguments put forth in previous responses concerning the distinctions between the present invention as recited in the independent claims and Suzuki and as are discussed, above, in the section addressing the Office Action's response to arguments. The noted distinctions notwithstanding, the Applicants have amended the claims to more particularly point out the present invention.[10]

In particular, as to claim 1, Suzuki fails to teach determining whether the number of requests received is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level and aggregating a plurality of requests into a single request for a single copy of the real-time streaming media and sending the single request for a single copy of the real-time streaming media to the wide area network. The Applicants submit that, as discussed above, the cited portions of Suzuki cited by the Office Action fail to teach the requisite "defined maximum number" and Suzuki fails to teach any determination whether the number of requests is greater than the defined maximum number.

Suzuki also fails to teach receiving by at least one aggregation module a request for real-time streaming media accessible via a wide area network from each of a plurality of receivers, each request comprising an identifier representative of the receiver making the request and a

[8] *See* discussion, Office Comm. p. 4.
[9] Office Comm. p. 4.
[10] As the Applicants maintain that there are distinctions over the cited art, the amendments are made for purposes of clarity but not for purposes of patentability. However, the Applicants respectfully request consideration of the claims as now amended.

recitation of the access rights associated with the requesting receiver, and the aggregation module storing a list of each of the unique identifiers received for future access.

Further, Suzuki fails to teach the aggregation module tracking the activities of receivers and identifying frequently requested real-time streaming or continuous media.

Because Suzuki fails to teach each and every element of claim 1 as now recited, a rejection under 35 U.S.C. § 102 would be improper and should be withdrawn. Accordingly, the Applicants respectfully request favorable reconsideration of claim 1.

Claim 10 recites a computer program product embodiment of claim 1. Accordingly, the above discussion applies equally to claim 10 and the Applicants respectfully request favorable reconsideration of claim 10.

Claim 11 was also rejected under 35 U.S.C. § 102 in view of Suzuki. The Applicants submit that Suzuki fails to teach each and every element of claim 11 as now amended and so a rejection under 35 U.S.C. § 102 in view of Suzuki should be withdrawn.

In particular, Suzuki fails to teach receiving at an aggregation module a request for streaming media accessible via a network from each of a plurality of receivers and the aggregation module determining whether the number of requests received is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level. (The Applicant respectfully reiterates and incorporates the discussion, above, concerning the defined maximum number.)

Suzuki also fails to teach each request comprising an identifier representative of the receiver making the request and a recitation of the access rights associated with the requesting receiver. Suzuki fails to teach the aggregation module storing a list of each of the unique identifiers received for future access and Suzuki fails to teach the aggregation module tracking the activities of receivers and identifying frequently requested real-time streaming or continuous media.

Because of at least the noted distinctions, the Applicants submit that Suzuki fails to teach each and every element of claim 11 as now recited, a rejection under 35 U.S.C. § 102 would be improper and should be withdrawn. Accordingly, the Applicants respectfully request favorable reconsideration of claim 11.

Claim 25 recites a computer program product embodiment of claim 1. Accordingly, the above discussion applies equally to claim 25 and the Applicants respectfully request favorable reconsideration of claim 25.

Claim 38 was also rejected under 35 U.S.C. § 102 in view of Suzuki. The Applicants submit that Suzuki fails to teach each and every element of claim 38 as now amended and so a rejection under 35 U.S.C. § 102 in view of Suzuki should be withdrawn.

In particular, Suzuki fails to teach determin[ing] whether a number of requests is greater than a defined maximum number of requests that maintains a connection rate of a shared network at a preferred level. (The Applicants respectively incorporate the above discussion concerning the defined maximum number.)

Suzuki also fails to teach chang[ing] the delivery of the streaming media from a first format to a multicast format based upon changes to the first connection rate as media is delivered to two or more of the plurality of receivers. (The Applicants respectively incorporate the above discussion concerning multicasing.)

Suzuki also fails to teach requests comprising an identifier representative of the receiver making the request and a recitation of the access rights associated with the requesting receiver. Further, Suzuki fails to teach track[ing] the activities of receivers and identifying frequently requested real-time streaming or continuous media.

Because of at least the noted distinctions, the Applicants submit that Suzuki fails to teach each and every element of claim 38 as now recited, a rejection under 35 U.S.C. § 102 would be improper and should be withdrawn. Accordingly, the Applicants respectfully request favorable reconsideration of claim 38.

In view of the foregoing, Applicants respectfully submit that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicants acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicants reserve the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicants specifically request that the Examiner

provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at 801-533-9800.

Dated this 16th day of January, 2008.

Respectfully submitted,

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